

ABSTRACT

A device and method for detecting the presence or absence of a prokaryotic microorganism are provided, comprising the steps of identifying a protein, such as a microbial-specific protease that characterizes the presence of a specific prokaryotic microbe and thereby provides a marker for that microbe; detecting the protease that is a marker for the presence of a specific prokaryotic microbe by cleaving a substrate when the protease is present; and signaling the presence of that protease when cleavage has occurred. More specifically, the method comprises identifying at least one outer membrane protein or a secreted protein that is unique to a particular microbial pathogen such as for example *Listeria monocytogenes* and that is substrate specific.

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